

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/047220 A1**

(51) International Patent Classification<sup>7</sup>: **H01Q 1/24**,  
H01P 1/10, H01Q 5/00, 9/04

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Little Britain, London EC1A 7DH (GB).

(21) International Application Number:  
PCT/EP2002/012985

(22) International Filing Date:  
20 November 2002 (20.11.2002)

(25) Filing Language: English

(26) Publication Language: English

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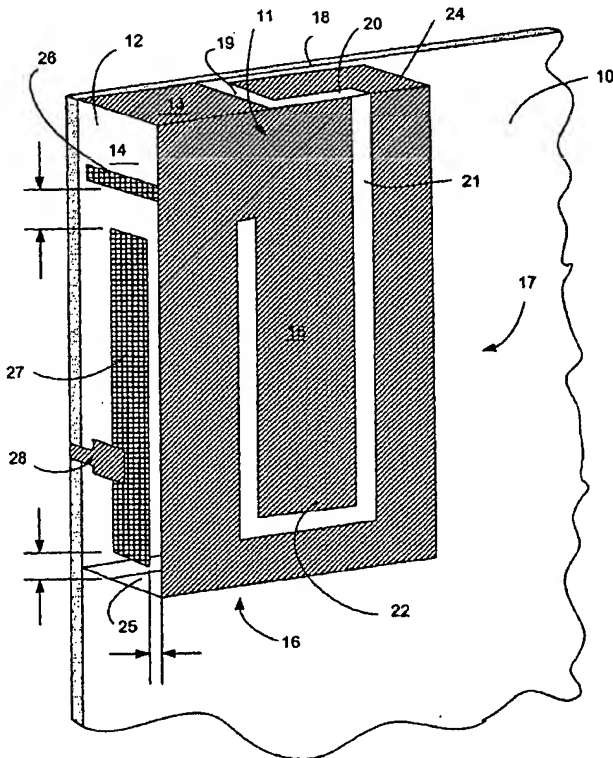
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: CONTROLLABLE ANTENNA ARRANGEMENT



(57) Abstract: An antenna (11) includes a patch antenna element (22) capacitively coupled to a load patch (27). A switch (33) connects the load patch (27) to one of one or more strip lines (35, 37, 40), each of which has a different length. Each strip lines causes the load patch (27) to have a different impedance, with one causing a short circuit, one causing an open circuit, and one causing an impedance in between these extremes. Different impedances of the load patch (27) cause different frequencies of operation of the antenna patch (22) by virtue of the capacitive coupling therebetween. The antenna (11) is thereby tuneable to three separate frequencies. Other frequency bands are unaffected by virtue of the location of the load patch (27) relative to the antenna patch (22). By allowing tuning by way of controlling the impedance of the load patch (27), the antenna arrangement can be made smaller than a corresponding passive antenna operable at the same frequencies. By using an N throw switch, N strip lines of different lengths can be connected, each giving rise to a different operating frequency.

WO 2004/047220 A1



**Published:**

— with international search report

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